

# Puget Sound Fish Consumption Advice

October 2006

## Advice for People Who Eat Salmon, Rockfish, and Flatfish from Puget Sound

### **Why is there a fish advisory for Puget Sound?**

Over the past decade, the Puget Sound Assessment and Monitoring Program has tested for contaminants in several Puget Sound fish (Chinook and coho salmon, English sole, and four species of rockfish). Some types of fish were found to have higher levels of contaminants than others.

The Washington State Department of Health (DOH) has identified two contaminants that pose a potential health concern for people who eat certain species of Puget Sound fish:

- PCBs (Polychlorinated biphenyls)
- Mercury (Methylmercury)

DOH is providing consumption advice for particular species of fish in Puget Sound based on levels of one or both of these contaminants. We recommend that people, especially women who might become pregnant or who are pregnant, nursing mothers, and young children, minimize exposure to these contaminants by following advice in this healthy fish eating guide.

### **What are the health benefits of fish?**

Fish is high in protein and is an excellent source of omega-3 fatty acids, which are not found naturally in our bodies. Omega-3 fatty acids are essential during pregnancy for the healthy development of a child's brain, retina, and nerve tissue. Omega-3 fatty acids help prevent heart disease and stroke by reducing blood pressure, inflammation, and blood clotting.

Other foods like beef, poultry, and pork also have some contaminants. Removing fish from your diet will not eliminate your exposure, but will eliminate the many health benefits that you get from eating fish. So, keep eating fish!

### **What are PCBs and mercury and how do they affect health?**

**PCBs** - PCBs are a group of chemicals that were once used widely in products such as coolants and lubricants for transformers. In 1977, PCBs were banned because of their potential to affect health and persistence in the environment. Children exposed to PCBs in the womb may have learning and behavior problems later in life. PCBs can also impact the immune system.



**Mary Selecky**  
Secretary of  
Health

*"It's good to know that fish in Puget Sound, especially our salmon, remain a healthy choice for the dinner table. While we provide clear information on the many choices of fish that are low in contamination, let's also be clear about the need to keep toxics out of Puget Sound."*

**Mercury** - Mercury occurs naturally in the environment. It also comes from industrial air pollution and improper disposal of thermostats, electrical switches, and fluorescent bulbs. Mercury is linked to learning and behavior problems in kids. Like PCBs, exposure to mercury in the womb can cause learning and behavior problems later in life.

### **How do PCBs and mercury get into Puget Sound fish?**

PCBs and mercury enter rivers and streams through air or direct release, then settle into sediments. Some fish eat prey associated with sediments. Aquatic organisms do not eliminate these chemicals easily. These contaminants can move up the food chain into predatory fish, then passed to humans who eat fish.



# A Healthy Eating Guide for Salmon, Rockfish, and Flatfish from Puget Sound

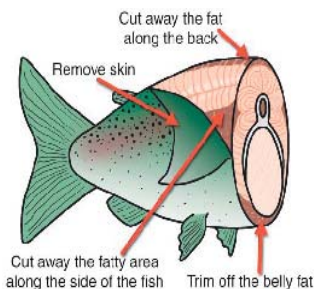
Advice for anyone concerned about contaminants in fish, especially women who might become pregnant, women who are pregnant, nursing mothers, and young children.

## Puget Sound Fish Consumption Guidance

Fish is a vital part of a healthy diet. Do not stop eating fish. Most foods have some contaminants in them, not just Puget Sound fish. The following advice will limit your exposure to contaminants and maximize the many health benefits from eating fish.

The two main ways to reduce your exposure to contaminants in fish are through wise choices and good fish preparation. Fish preparation recommendations can reduce, by up to 50 percent, PCBs and other contaminants that collect in the fat of fish. Mercury is stored in the muscle of fish and cannot be reduced by cleaning this way.

### DOH Fish Preparation Recommendations



Consume younger, smaller fish (within legal limits).

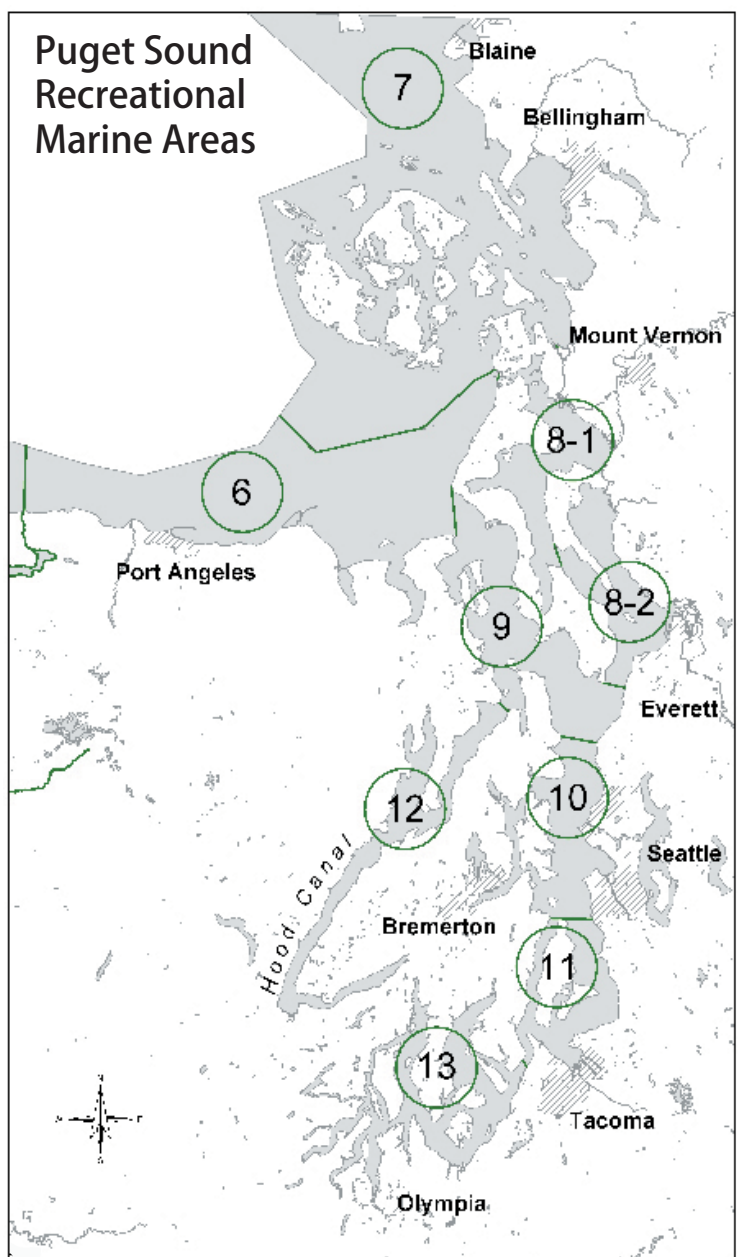
When cleaning fish, remove the skin, fat, and internal organs before cooking.

Grill, bake, or broil fish so that the fat drips off while cooking.

### How to Use the Following Tables

Fish consumption guidance is organized by Washington State Department of Fish and Wildlife's (WDFW) marine areas. To use the following tables, locate the "Recreational Marine Area" where you catch fish. Follow the consumption advice for that area. Note, one meal is eight ounces of fish uncooked and no restrictions means you can eat 2 to 3 meals per week. If you eat the amount recommended for the week, be sure to choose other fish that are lower in contaminants for any other meals that week. Some good choices are canned light tuna, cod, flounder, coastal salmon, and trout. For additional choices visit [www.doh.wa.gov/fish](http://www.doh.wa.gov/fish).

If there are "no restrictions" for the fish you like to eat in these tables, follow the American Heart Association recommendations and enjoy at least 2 heart healthy meals per week.



# Puget Sound Salmon



Salmon from Puget Sound have low levels of contaminants and are a healthy food. The American Heart Association recommends that people eat at least two fish meals per week for a healthy heart.

Salmon are a good choice when choosing fish from Puget Sound. There are no meal restrictions for coho, chum, pink, and sockeye salmon which means you can eat 2 to 3 meals per week. DOH recommends eating Puget Sound Chinook once per week.

Resident Chinook (blackmouth) appear to have higher levels of contaminants, so eat only two meals per month. Most blackmouth remain in Puget Sound rather than migrate to the ocean, so they accumulate more contaminants.

Puget Sound Salmon*		All Puget Sound Marine Areas
Marine Area	Salmon Species	Consumption Advice
6 thru 13	Chinook	No more than 1 meal per week
6 thru 13	Chinook (Blackmouth)	No more than 2 meals per month
6 thru 13	Coho	No restrictions
6 thru 13	Chum, Pink, Sockeye**	No restrictions
* High-end consumers (more than 2 meals per week) should follow DOH's fish preparation recommendations.		
** Chum, pink, and sockeye salmon were not sampled as part of PSAMP. Data from other sources show that these species tend to have low PCB levels.		

# Puget Sound Rockfish



Rockfish consumption advice is based on contaminant levels in brown, quillback, and copper rockfish from Puget Sound. In addition to contaminant concerns, non-tribal harvest of yelloweye and canary rockfish is prohibited for conservation purposes.

Puget Sound Rockfish				
Marine Area/ Location	Rockfish Species	Consumption Advice	Exceptions	
6 thru 13	All Puget Sound Marine Areas	Yelloweye Rockfish*	No consumption	None
6 thru 13	All Puget Sound Marine Areas	Canary Rockfish*	No consumption	None
6	East Juan de Fuca Strait	Rockfish	No more than 1 meal per week	None
7	San Juan Islands	Rockfish	No more than 1 meal per week	None
8.1	Deception Pass, Hope Island & Skagit Bay	Rockfish	No more than 1 meal per week	None
8.2	Port Susan/ Port Gardner	Rockfish	No more than 1 meal per week	Yes
	Mukilteo-Everett/ Port Gardner	Rockfish	No more than 2 meals per month	
9	Admiralty Inlet	Rockfish	No more than 1 meal per week	None
10	Seattle-Bremerton	Rockfish	No more than 1 meal per week	Yes
	Elliott Bay	Rockfish	No consumption	
	Sinclair Inlet	Rockfish	No consumption	
11	Tacoma-Vashon	Rockfish	No more than 1 meal per week	None
12	Hood Canal	Rockfish	No more than 1 meal per week	None
13	South Puget Sound (South of the Tacoma Narrows)	Rockfish	No more than 1 meal per week	None
* Non-tribal harvest of yelloweye and canary rockfish is prohibited for conservation purposes.				

# English Sole & Other Flatfish

The following advice applies to consumption of Puget Sound flatfish including English sole, starry flounder, and rock sole. No restrictions means you can eat 2 to 3 meals per week.

Puget Sound English Sole & Other Flatfish*			
Marine Area/ Location		Consumption Advice	Exceptions
6	East Juan de Fuca Strait	No restrictions	None
7	San Juan Islands	No restrictions	None
8.1	Deception Pass, Hope Island & Skagit Bay	No restrictions	None
8.2	Port Susan/ Port Gardner	No restrictions	Yes
	Mukilteo Ferry Dock to City of Everett	No more than 2 meals per month	
9	Admiralty Inlet	No restrictions	None
10	Seattle-Bremerton	No restrictions	Yes
	Duwamish Waterway	No consumption	
	Elliott Bay	No more than 2 meals per month	
	Eagle Harbor	No more than 1 meal per week	
	Port Orchard Passage	No more than 1 meal per week	
	Sinclair Inlet	No more than 1 meal per month	
11	Tacoma- Vashon	No restrictions	Yes
	Inner Commencement Bay	No more than 2 meals per month	
	Outer Commencement Bay	No more than 1 meal per week	
12	Hood Canal	No restrictions	None
13	South Puget Sound (South of the Tacoma Narrows)	No restrictions	None
* Recommendations for consuming other bottomfish such as lingcod, are not included in the above advice.			

## For More Information About:

### Fish Advisories in Washington State

Contact: Washington State Department of Health  
Fish Consumption Advisory Program  
Toll Free: 1.877.485.7316  
[www.doh.wa.gov/fish](http://www.doh.wa.gov/fish)

### The Health of Puget Sound

Contact: Puget Sound Partnership  
Toll Free: 1.800.54.Sound  
[www.psp.wa.gov](http://www.psp.wa.gov)

### Puget Sound Ambient Monitoring Program Fish Component

Contact: Washington State Department of Fish & Wildlife  
Ph: 360.902.2200  
[www.wdfw.wa.gov/fish/psamp](http://www.wdfw.wa.gov/fish/psamp)

### Fishing Regulations in Puget Sound

Contact: Washington State Department of Fish & Wildlife  
Ph: 360.902.2700  
[www.wdfw.wa.gov/fishing](http://www.wdfw.wa.gov/fishing)

**"It is important to continue to eat fish,  
be smart, and choose fish wisely."**

*Maxine Hayes  
State Health Officer*



### Graphics and Photo Credits:

Fish graphic courtesy of Windsor Nature Discovery (Toll-Free 1.800.833.6388), Puget Sound image courtesy of Don Lennartson, and Angler with Chinook courtesy of Dom Reale.

This document is available in other formats for persons with disabilities. TDD LINE: 1-800-833-6388.

October 2006 DOH Publication #334-098